

# SUDBURY-ASSABET-CONCORD RIVER WATERSHED ACTION PLAN

Prepared in Conjunction with the 5-Year Watershed Assessment Report

Prepared for the Massachusetts Executive Office of Environmental Affairs



Prepared By:

Ambient Engineering



SuAsCo Watershed Community Council



Draft 2005

# **1 Sudbury-Assabet-Concord River Watershed Action Plan Vision Statement**

The purpose of this 5-Year Watershed Action Plan for the Sudbury-Assabet-Concord River (SuAsCo) Watershed is to identify critical natural resource problems, propose appropriate responses, and chart a course of action for working together to achieve the watershed-wide goals listed below. Although it is recognized that fulfillment of the watershed-wide goals will take longer than the five years of this Action Plan, the Plan provides an important stepping stone towards the achievement of this watershed vision.

To protect natural resources, decisions and actions must be informed by a watershed perspective. Collaboration among local, state, federal and regional government, businesses, academia, nonprofit and environmental organizations, and residents is vital in order to achieve these watershed goals.

## **1.1 SuAsCo Watershed-Wide Problems:**

- Nutrient pollution in the waterways of the SuAsCo, particularly the Assabet River and Hop Brook in Marlborough and Sudbury
- Depletion of aquifers, wetlands, ponds, rivers and streams by groundwater withdrawal and lack of sufficient recharge
- Loss of biodiversity caused by invasive species and habitat destruction
- Habitat fragmentation such as by dams, culverts, and highways
- Loss of lands with high conservation and recreation value due to misplaced development
- Environmental contamination by toxic substances

## **1.2 SuAsCo Watershed-Wide Goals:**

- *Management Goal:* an active, cooperative, and communicative Watershed Community where collaboration is facilitated among all stakeholders
- *Growth and Development Goal:* “smart growth” throughout the Watershed: well-planned, responsible development that results in sustainable resource use through efficiency, conservation, education, and community building
- *Water Quality Goal:* a fishable, swimmable Sudbury, Assabet, and Concord River
- *Water Quantity Goal:* ample and sustainable surface and groundwater to support river-dependent wildlife, and recreation and other human uses
- *Land Protection/Open Space Goal:* preserved natural green areas at a significant scale that have value for habitat, recreation, scenery, water recharge, ecological uses, and/or historic significance
- *Habitat/Biodiversity Goal:* healthy, diverse natural communities of native species linked by corridors that preserve ecological integrity
- *Outreach and Education Goal:* public awareness and appreciation of the SuAsCo Watershed’s valuable natural resources and the strategies to protect them
- *Recreation Goal:* opportunities for people to enjoy the SuAsCo Watershed’s natural attributes consistent with the needs of wildlife and other competing needs and uses

## **2 SuAsCo Watershed Priority Actions**

### **2.1 Overall Actions**

- Implement the SuAsCo Watershed Action Plan (WAP), revisit the SuAsCo WAP regularly, revise as needed, and use as a “yardstick” for tracking watershed progress

### **2.2 Growth and Development Actions**

- Encourage communities to adopt local Low Impact Development (LID) bylaws
- Encourage municipal boards to talk and work together within and across municipal boundaries
- Encourage smart growth throughout the Watershed by requiring developers to conduct a cumulative impact study on proposed developments, assessing cumulative impacts from development projects, and creating developer incentives for doing greenway design

### **2.3 Water Quality Actions**

- Explore innovative wastewater treatment technologies and seek federal funding to support such strategies in order to cost-effectively decrease wastewater effluent concentrations
- Create incentives for constructing septic systems and small package plants rather than large, municipal centralized systems with the goal of “keeping water local”
- Continue to identify all toxic waste sites in the Watershed and track their clean up
- Perform stream team surveys and notify property owners and local conservation commissions of infractions of wetlands and river regulations
- Create local bylaws to minimize use of lawn fertilizers, pesticides, and herbicides, and encourage appropriate depth of loam, especially in new developments
- Conduct TMDL studies by tributary watershed, where necessary, and implement results of all TMDL studies

### **2.4 Water Quantity Actions**

- Continue research studies on water balance (aquifer inflow/outflow) on all three rivers and identify smaller sub-basins that are highly stressed
- Educate about and encourage the use of landscaping options that require less water, e.g., create local bylaws to limit sprinkler use and the installation of private wells for lawn watering
- Regionalize the allocation of water resources so as to allot sustainable quantity to meet water requirements for human and commercial consumption and aquatic habitat in each subbasin
- Conduct research to determine ecological flow regimes that maintain the physical, chemical and biological integrity of rivers and streams; and model natural stream flow regimes
- Provide funding and technical assistance to municipalities to aid implementation of the Massachusetts Water Policy

### **2.5 Land Protection/Open Space Actions**

- Increase local, state, and federal funding for land acquisition and protection
- Identify priority lands for protection through the use and coordination of the existing

- Biodiversity Plan, Greenprint for Growth, and other data sources such as aquifer recharge area maps
- Encourage municipalities to pass the Community Preservation Act (CPA)
- 2.6 Habitat/Biodiversity Actions**
- Increase funding for land/habitat acquisition and increase stewardship with emphasis on biodiversity, habitat corridors, and river continuity
  - Make culverts and bridges fish- and wildlife- friendly when they are replaced
  - Overlay biodiversity and greenways plans over source water protection maps to identify priority parcels for protection
  - Define, assess, and control the occurrence and impact of invasive species
  - Install fish passages or remove dams to allow for anadromous fishery return
- 2.7 Outreach and Education Actions**
- Educate homeowners, businesses and all property owners on riparian buffers, lawn care, vegetative plantings, over watering, etc.
  - Create a Best Management Practices Workbook on water pollution reduction, and educate communities regarding those practices
  - Embark on a public education campaign on water conservation
  - Embark on a public education campaign on stormwater best management practices
- 2.8 Recreational Opportunities Actions**
- Connect missing links along the Bay Circuit trail, the Concord River Corridor trail, rail trails, and trails to tributary connections with sensitivity to their context
  - Assess and manage recreational impacts on the environment and natural resources
  - Preserve riparian land for recreational uses such as open space, access, fishing

### **3 SuAsCo Watershed Priority Action Details**

The Watershed priority details have been presented in matrix format to allow for easier review and comparison. Notes regarding the information in the Action Matrices:

- ❖ the list of participants is not intended to be comprehensive, and is intended to be interpreted broadly (for instance, “environmental organizations” may include watershed groups, land trusts, etc.)
- ❖ the list of participants for some actions include specific organizations or agencies when appropriate
- ❖ the list of possible funding sources are not intended to be comprehensive
- ❖ the potential tasks listed are neither comprehensive nor prioritized, but are intended as suggestions and starting points; many of the potential tasks were recommended by the public in the River Visions 2005 workshops.

### 3.1 OVERALL ACTIONS

- *Goal: an active, cooperative, and communicative Watershed Community where collaboration is facilitated among all stakeholders through vehicles such as the SuAsCo Watershed Community Council*

<b>ACTION:</b>	<b>Participants:</b>	<b>Possible Funding Sources:</b>	<b>Timeline:</b>	<b>Potential Tasks:</b>
Implement the SuAsCo Watershed Action Plan, revisit the SuAsCo WAP regularly, revise as needed, and use as a “yardstick” for tracking watershed progress	All watershed stakeholders as outlined throughout the Plan with the SuAsCo Watershed Community Council (WCC) serving a facilitative role where possible	As outlined throughout the Plan	Throughout the 5-year timeframe	Promote coordination and communication among all watershed stakeholders; Hold collaborative meetings; Share technical assistance, model bylaws, and other information through listserves, websites, periodic meetings, workshops, etc.; Measure progress on priority actions; Lobby for and seek funding for implementation of priority actions; Form a Task Force to meet quarterly to discuss WAP progress, specifically implementation issues and funding sources

### 3.2 GROWTH & DEVELOPMENT ACTIONS

- *Goal: “smart growth” throughout the Watershed: well-planned, responsible development that results in sustainable resource use through efficiency, conservation, education, and community building*

<b>ACTION:</b>  Encourage communities to adopt local Low Impact Development (LID) bylaws	<b>Participants:</b>  Municipal Planning Boards; Conservation Commissions; Public Work Departments (DPWs); Boards of Health; Regional Planning Agencies; MA EOE LID Working Group; Regional collaborative groups such as SuAsCo WCC, MA Association of Conservation Commissions, MA Municipal Association, MetroWest Growth Management Committee, MAGIC, Wild & Scenic River Stewardship Council; Land trusts	<b>Possible Funding Sources:</b>  Municipal; State operating budget and grants; Federal grants	<b>Timeline:</b>  Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b>  Identify LID guidelines and create model LID bylaws for appropriate densities and locations; Assist communities to adopt LID bylaws
<b>ACTION:</b>  Encourage municipal boards to talk and work together within and across municipal boundaries	<b>Participants:</b>  Municipal boards and staff; Regional collaborative groups such as MAGIC, MWGMC, SuAsCo WCC, Wild & Scenic River Stewardship Council, Assabet Consortium, 495/MetroWest Corridor Partnership	<b>Possible Funding Sources:</b>  Municipal; Businesses; Foundation grants	<b>Timeline:</b>  Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b>  Establish a resource of models, data, reports, etc. for communities to access and use; Use intra and inter municipal websites for distribution of information regarding development(s); Regional organizations host inter-municipal workshops

<b>ACTION:</b>	<b>Participants:</b>	<b>Possible Funding Sources:</b>	<b>Timeline:</b>	<b>Potential Tasks:</b>
Encourage smart growth throughout the Watershed by requiring developers to conduct a cumulative impact study on proposed developments, assessing cumulative impacts from development projects, and creating developer incentives for doing greenway design	Municipalities; Developers; Regional organizations	Municipal; State; Developers	Start immediately and continue as an ongoing effort	Create a development assessment model which includes all impacts of development including fiscal (such as cost of providing municipal services), environmental (such as water use, stormwater impacts), transportation, etc.; Developers apply model to assess cumulative impacts; Provide information and model results to abutters and municipal boards; Create greenway design incentives for developers through bylaws, planning board review, etc.



### 3.3 WATER QUALITY ACTIONS

➤ *Goal: a fishable, swimmable Sudbury, Assabet, and Concord River*

<b>ACTION:</b> Explore innovative wastewater treatment technologies and seek federal funding to support such strategies in order to cost-effectively decrease wastewater effluent concentrations	<b>Participants:</b> Federal such as EPA; State such as DEP; Municipalities; Environmental organizations; Wastewater treatment engineering firms and consultants	<b>Possible Funding Sources:</b> Federal; State; Municipal; Businesses; Foundation grants	<b>Timeline:</b> Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b> Monitor success of CoMag demonstration and full-scale expansion in Concord; Lobby for State and Federal funding for innovative technology research and demonstration projects for wastewater treatment
<b>ACTION:</b> Create incentives for constructing septic systems and small package plants rather than large, municipal centralized systems with the goal of “keeping water local”	<b>Participants:</b> State such as DEP and EOEA; Municipalities; Environmental organizations; Wastewater treatment engineering firms and consultants	<b>Possible Funding Sources:</b> Federal; State; Municipal; Businesses; Foundation grants	<b>Timeline:</b> As funding becomes available during the 5-year timeframe	<b>Potential Tasks:</b> Create incentives for constructing septic systems and small package plants in new developments; Draft bylaws to encourage proper maintenance of septic systems and discourage hook up to centralized systems
<b>ACTION:</b> Continue to identify all toxic waste sites in the Watershed and track their clean up	<b>Participants:</b> State such as DEP; Federal such as EPA; Municipalities such as Boards of Health; Businesses; Environmental organizations; Regional organizations such as SuAsCo WCC	<b>Possible Funding Sources:</b> Federal Superfund Program; State; Municipal; Businesses; Foundation grants	<b>Timeline:</b> Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b> Hold public forums on clean up goals and progress on toxic waste sites in Watershed; Establish Technical Advisory Committees for each toxic waste site and establish communication channels and meetings between the committees

<b>ACTION:</b> Perform stream team surveys and notify property owners and local conservation commissions of infractions of wetlands and river regulations	<b>Participants:</b> Municipalities; MA Riverways Program; Stream teams; Watershed and river organizations	<b>Possible Funding Sources:</b> State grants; Foundation grants; Municipal	<b>Timeline:</b> Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b> Create a database of stream team survey results; Support increased funding for Riverways Program; Re-do stream team surveys that are more than 10 years old; Conduct stream team surveys on unsurveyed portions of tributaries and rivers; Require/encourage developers to help fund stream team surveys
<b>ACTION:</b> Create local bylaws to minimize use of lawn fertilizers, pesticides and herbicides, and encourage appropriate depth of loam, especially in new developments	<b>Participants:</b> Municipalities and MACC; Landscapers; Garden centers; Environmental organizations; Regional organizations	<b>Possible Funding Sources:</b> Municipal; Businesses; Foundation grants	<b>Timeline:</b> During the 5-year timeframe as funding becomes available	<b>Potential Tasks:</b> Create local bylaws to minimize use of lawn fertilizers, pesticides and herbicides, and encourage appropriate depth of loam, especially in new developments; Promote IPM techniques; Conduct research on turf grass BMPs (see Appendix for turf grass BMP research draft)
<b>ACTION:</b> Conduct TMDL studies by tributary watershed, where necessary, and implement results of all TMDL studies	<b>Participants:</b> USGS; US Army Corps of Engineers; US EPA; MA DEP; Municipalities; NPDES permit holders; Environmental consulting firms; Environmental organizations	<b>Possible Funding Sources:</b> Federal; State	<b>Timeline:</b> Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b> Conduct TMDL studies where appropriate; Implement TMDL study results; Track implementation success and monitor for improvements in water quality

### 3.4 WATER QUANTITY ACTIONS

- *Goal: ample and sustainable surface and groundwater to support river-dependent wildlife, and recreation and other human uses*

<b>ACTION:</b>	<b>Participants:</b>	<b>Possible Funding Sources:</b>	<b>Timeline:</b>	<b>Potential Tasks:</b>
Continue research studies on water balance (aquifer inflow/outflow) on all three rivers and identify smaller sub-basins that are highly stressed	USGS; MA DCR; SuAsCo WCC; MA Riverways RIFFLES Program; Municipalities; Watershed and river organizations such as OAR and SRWO	State; Federal; Foundation grants; Businesses; in-kind monitoring help from volunteers	Assabet River done already; Sudbury River in process; Need more funding for Sudbury River MESO Habitat study; Start Concord River when the Sudbury is finished	Complete USGS study on Sudbury River; Conduct USGS study on Concord River; Conduct additional scenarios on the Assabet, Sudbury and Concord Rivers; Focus additional USGS studies on sub-basin tributaries of the Sudbury, Assabet and Concord Rivers; Work with Riverways Riffles Program to assist volunteers from stream teams, watershed organizations and river groups to monitor flow on tributaries; Form a Task Force to meet quarterly to discuss implementation issues and funding sources

<p><b>ACTION:</b></p> <p>Educate about and encourage the use of landscaping options that require less water, e.g., create local bylaws to limit sprinkler use and the installation of private wells for lawn watering</p>	<p><b>Participants:</b></p> <p>Businesses, specifically landscapers, garden centers, and developers; Municipalities including DPW, Water Departments, and Schools; Cooperative Extension Service; Environmental organizations; Cable Networks and Local Access</p>	<p><b>Possible Funding Sources:</b></p> <p>Municipal; Businesses; MA EOE; Foundation grants</p>	<p><b>Timeline:</b></p> <p>Already underway and to continue throughout the 5-year timeframe</p>	<p><b>Potential Tasks:</b></p> <p>Businesses educate customers through workshops and flyers (ex: Russell's Garden Center holds workshops and hands out flyers on water conservation); Assist local Water Departments to: enforce local water bans, and send out educational flyers on water conservation with water bills, including why wise water use is important to stream flow and tips on proper lawn watering techniques; Encourage dialogue between landscapers, Water Departments and DPWs on local water issues; Hold workshops to educate municipal employees on water issues; Use Cable network and local access to distribute water conservation information; Educate students on water conservation as part of school curriculum; Create bylaws to limit sprinkler use and to disallow the installation of private wells for lawn watering; Local Water Departments work with homeowners to retrofit all outside lawn watering systems with moisture sensors; Encourage the practice of "water harvesting" (ex: rain barrels)</p>
<p><b>ACTION:</b></p> <p>Regionalize the allocation of water resources so as to allot sustainable quantity to meet water requirements needed for human and commercial consumption and aquatic habitat in each subbasin, i.e. manage water use, demand and source withdrawal so that human (residential and business) and ecological needs are both met</p>	<p><b>Participants:</b></p> <p>State; Municipalities; RPAs; SuAsCo WCC; Environmental organizations; Regional organizations</p>	<p><b>Possible Funding Sources:</b></p> <p>State; Municipal; Foundation grants</p>	<p><b>Timeline:</b></p> <p>Efforts already underway and to continue throughout the 5-year timeframe</p>	<p><b>Potential Tasks:</b></p> <p>Implement study results on water balance allocation through well permits and other requirements; Coordinate water management permits across municipal boundaries</p>

<b>ACTION:</b>  Conduct research to determine ecological flow regimes that maintain the physical, chemical and biological integrity of rivers and streams; and model natural stream flow regimes	<b>Participants:</b>  USGS; MA DCR; SuAsCo WCC; MA Riverways: RIFFLES Program; Watershed and River Organizations such as SRWO and OAR; Municipalities	<b>Possible Funding Sources:</b>  State; Federal; Foundation grants; Businesses; in-kind monitoring help from volunteers	<b>Timeline:</b>  Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b>  Continue research on ecological flow regimes (physical, chemical and biological characteristics) of rivers and streams in SuAsCo Watershed; Conduct modeling of natural stream flow regimes of rivers and streams in SuAsCo Watershed and compare to State standards
<b>ACTION:</b>  Provide funding and technical assistance to municipalities to aid implementation of the Massachusetts Water Policy	<b>Participants:</b>  Municipalities; RPAs; SuAsCo WCC; Environmental consultants; Environmental organizations	<b>Possible Funding Sources:</b>  Municipal; State; Foundation grants	<b>Timeline:</b>  Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b>  Water Departments conduct periodic water audits; Hold workshops and conferences to help municipalities with implementation of the MA Water Policy goals; Create media outreach toolkit and hook into MA Watershed Coalition “Water Web”; SuAsCo WCC and other organizations provide technical assistance and policy feedback to municipalities

### 3.5 LAND PROTECTION/OPEN SPACE ACTIONS

- *Goal: preserved natural green areas at a significant scale that have value for habitat, recreation, scenery, water recharge, ecological uses, and/or historic significance*

<b>ACTION:</b>	<b>Participants:</b>	<b>Possible Funding Sources:</b>	<b>Timeline:</b>	<b>Potential Tasks:</b>
Increase local, state, and federal funding for land acquisition and protection	Municipalities; State Legislature; Land trusts; Local open space and land preservation committees; Agricultural Commission; Farmers; Large landowners	State Environmental Bond; CPA; self-help grants	As funding becomes available – expected to take between 1 and 5 years to complete	Restore Bond cap for land conservation to \$50 million per year; Create a Green Budget for stewardship; Increase funding for fish and wildlife agencies; Lobby State to increase annual cap on self-help grants by 3 to 4 times; Increase and promote dialogue between municipal officials and residents about land protection; Create forums to educate and market local businesses and residents about benefits of land protection to the local economy; Develop “best practices” manual on collaborative land protection

<b>ACTION:</b>  Identify priority lands for protection through the use and coordination of the existing Biodiversity Plan, Greenprint for Growth, and other data sources such as aquifer recharge area maps	<b>Participants:</b>  Municipalities; State government; Federal government; Land trusts; Environmental organizations	<b>Possible Funding Sources:</b> State; Foundation grants	<b>Timeline:</b>  As funding becomes available – expected to take one year to complete	<b>Potential Tasks:</b>  Identify priority lands for protection using the Biodiversity Plan, Greenprint for Growth, and other data sources such as aquifer recharge area maps; Make priority lands information available to communities and land protection organizations; Coordinate use of land protection information
<b>ACTION:</b>  Encourage municipalities to pass the Community Preservation Act (CPA)	<b>Participants:</b>  Municipalities; Land Trusts; Local open space and land preservation committees; Environmental organizations; Historical organizations; Housing advocacy groups; CPA Coalition; RPAs	<b>Possible Funding Sources:</b> Municipal; Foundation grants	<b>Timeline:</b>  Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b>  Hold forums on benefits of CPA and municipal experiences in passing CPA (such as the Forum sponsored by MAPC, MAGIC, MWGMC and others held in Framingham on March 31, 2005); Foster a dialogue through meetings, e-mails, etc. among municipalities in the SuAsCo Watershed on CPA benefits

### 3.6 HABITAT/BIODIVERSITY ACTIONS

➤ *Goal: healthy, diverse natural communities of native species linked by corridors that preserve ecological integrity*

<b>ACTION:</b>  Increase funding for land/habitat acquisition and increase stewardship with emphasis on biodiversity, habitat corridors, and river continuity	<b>Participants:</b>  Municipalities; Land trusts; MA Department of Fisheries and Wildlife; MA Department of Conservation and Recreation; Federal National Park Service; Federal Fish & Wildlife Service; Federal Natural Resource and Conservation Service and local soil conservation commissions; Environmental organizations	<b>Possible Funding Sources:</b>  Federal; State; Municipal; Foundation grants; private dollars	<b>Timeline:</b>  Efforts already underway and to increase throughout the 5-year timeframe	<b>Potential Tasks:</b>  Convene a working group to compare and strengthen stewardship strategies; Lobby State and Federal government to increase funding for land/habitat acquisition; Start an education campaign on the meaning and importance of biodiversity, habitat corridors, and river continuity; Increase hosts, activities, and participants in Annual Biodiversity Days
<b>ACTION:</b>  Make culverts and bridges fish- and wildlife- friendly when they are replaced	<b>Participants:</b>  MA Highway Department; MA Riverways Program; Federal National Park Service; Federal Fish & Wildlife Service; Municipalities; Environmental organizations; Regional organizations such as Wild & Scenic River Stewardship Council	<b>Possible Funding Sources:</b>  Federal; State; Municipal; Foundation grants	<b>Timeline:</b>  Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b>  River Stewardship Council continue to comment on bridge and culvert replacements within the Wild and Scenic area; Form a committee to review new bridge and culvert proposals not in the River Stewardship Council jurisdiction; Submit review comments and recommendations to municipal, state and/or federal authority overseeing the construction



<b>ACTION:</b>  Overlay biodiversity and greenways plans over source water protection maps to identify priority parcels for protection	<b>Participants:</b>  Land trusts; Municipalities; State; Environmental organizations	<b>Possible Funding Sources:</b>  State; Municipal; Foundation grants	<b>Timeline:</b>  As funding becomes available	<b>Potential Tasks:</b>  Overlay biodiversity and greenways plans over source water protection maps to identify priority parcels for protection; Make priority parcel list available to communities and land protection organizations
<b>ACTION:</b>  Define, assess, and control the occurrence and impact of invasive species	<b>Participants:</b>  Regional organizations such as Wild & Scenic River Stewardship Council; Municipalities such as Conservation Commissions; State; Land trusts; New England Wildflower Society; New England Invasive Plant Group; MA Invasive Plant Advisory Group; Garden centers; Environmental organizations such as HBPA	<b>Possible Funding Sources:</b>  Federal; State; Municipal; Foundation grants	<b>Timeline:</b>  Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b>  Lobby for legislation and/or bylaws to make it illegal to distribute invasive species; Study distribution and density of invasive species in SuAsCo habitats; Hold weed harvesting, hand pulling, and other invasive eradication activities; Coordinate resource-sharing, mapping and publicity on a watershed scale
<b>ACTION:</b>  Install fish passages or remove dams to allow for anadromous fishery return	<b>Participants:</b>  US Fish & Wildlife Service; MA Fish & Wildlife Service; MA Riverways Program; Municipalities; RPAs; Businesses; Dam owners; Environmental organizations; Historical organizations	<b>Possible Funding Sources:</b>  Federal; State; Businesses; Foundation grants; private dollars	<b>Timeline:</b>  Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b>  Continue stocking of anadromous fishery; Continue volunteer monitoring of stocking success; Evaluate need and explore physical and fiscal feasibility of fish passage installation at specific dams; Encourage dialogue on pros and cons of dam removal where appropriate

### 3.7 OUTREACH & EDUCATION ACTIONS

- *Goal: public awareness and appreciation of the SuAsCo Watershed's valuable natural resources and the strategies to protect them*

<b>ACTION:</b>  Educate homeowners, businesses and all property owners on riparian buffers, lawn care, vegetative plantings, over watering, etc.	<b>Participants:</b>  Local Conservation Commissions; MA and Local Park and Recreation Departments, Ecological Landscaping Association; Garden centers; Federal Natural Resource and Conservation Service and local soil conservation commissions; EOEa; Green gardening and lawn care professionals; UMASS Extension; SuAsCo WCC; New England Wildflower Society; MA Audubon; Wild & Scenic River Stewardship Council	<b>Possible Funding Sources:</b> Foundation grants	<b>Timeline:</b>  Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b>  Hold workshops for homeowners, businesses and all property owners on riparian buffers, lawn care, vegetative plantings, over watering, etc.; Apply IPM Best Management Practices; Distribute educational information on turf grass best management practices (see Appendix for research draft as an informational source)
<b>ACTION:</b>  Create a Best Management Practices Workbook on water pollution reduction, and educate communities regarding those practices	<b>Participants:</b>  SuAsCo WCC; RPAs; Other regional collaborative groups – designated players should work in collaboration on this project	<b>Possible Funding Sources:</b> Federal grants; State grants; Foundation grants	<b>Timeline:</b>  As funding becomes available	<b>Potential Tasks:</b>  Create a Best Management Practices Workbook on water pollution reduction; Distribute workbook and hold workshops on BMPs

<b>ACTION:</b>  Embark on a public education campaign on water conservation	<b>Participants:</b>  Municipalities; Environmental organizations such as OAR and SRWO; Regional organizations such as SuAsCo WCC and Wild & Scenic River Stewardship Council	<b>Possible Funding Sources:</b> State grants; Municipal; Foundation grants	<b>Timeline:</b>  As funding becomes available	<b>Potential Tasks:</b>  Hold a media campaign on water supply limitations and water conservation strategies; Hold workshops on the “how to” and “reasons for” water conservation; Focus environmental organization annual meetings and events such as River Visions and River Fest on water conservation education; Encourage municipalities to price water so as to encourage conservation
<b>ACTION:</b>  Embark on a public education campaign on stormwater best management practices	<b>Participants:</b>  SuAsCo WCC; Municipalities	<b>Possible Funding Sources:</b> Municipal	<b>Timeline:</b>  Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b>  Continue SuAsCo WCC Stormwater Community Assistance Program development of annual stormwater education and participation tools; Expand SuAsCo WCC Stormwater Community Assistance Program to more municipalities

### 3.8 RECREATIONAL OPPORTUNITIES ACTIONS

- *Goal: opportunities for people to enjoy the SuAsCo Watershed's natural attributes consistent with the needs of wildlife and other competing needs and uses*

<b>ACTION:</b> Connect missing links along the Bay Circuit trail, the Concord River Corridor trail, rail trails, and trails to tributary connections with sensitivity to their context	<b>Participants:</b> Municipalities; Land trusts; Trail advocacy groups	<b>Possible Funding Sources:</b> Federal grants; State grants; Foundation grants; Municipal; private dollars	<b>Timeline:</b> Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b> Acquire land to connect missing links in trail systems; Expand trail systems with sensitivity to use, habitat, abutters, etc.
<b>ACTION:</b> Assess and manage recreational impacts on the environment and natural resources	<b>Participants:</b> Municipalities; Land trusts; MA Department of Conservation & Recreation; MA Fish & Wildlife; National Park Service; US Fish & Wildlife Service; environmental organizations	<b>Possible Funding Sources:</b> Federal operating budget and grants; State operating budget and grants; Municipal; Foundation grants	<b>Timeline:</b> Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b> Conduct study to identify environmental and natural resource impact criteria; Conduct study to assess environmental and natural resource impacts on recreational lands; Manage recreational lands in response to study results and public input
<b>ACTION:</b> Preserve riparian land for recreational uses such as open space, access, fishing, etc.	<b>Participants:</b> Municipal; State; Federal; Land trusts	<b>Possible Funding Sources:</b> Federal operating budget and grants; State operating budget and grants; Municipal; Foundation grants; private dollars	<b>Timeline:</b> Already underway and to continue throughout the 5-year timeframe	<b>Potential Tasks:</b> Seek funding for riparian land acquisition; Prioritize preservation of riparian land that provides uses such as open space, access, and fishing

